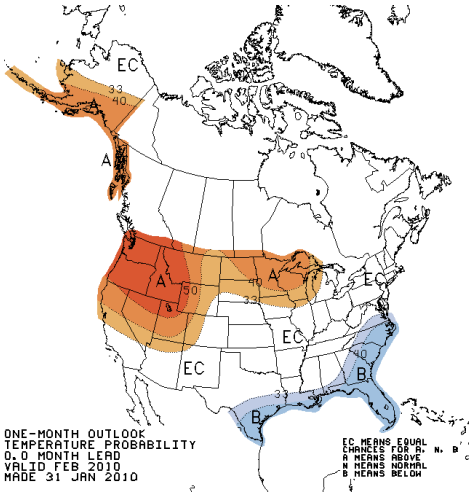
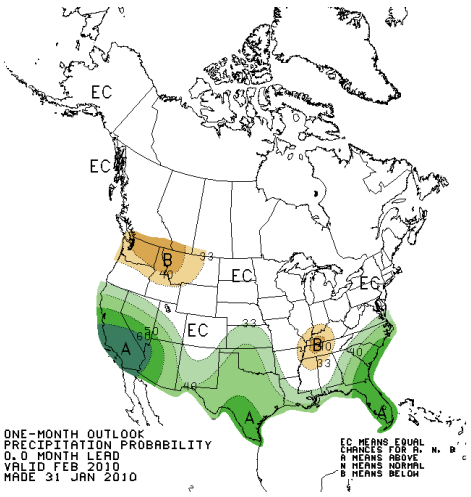
February - April 2010 Temperature and Precipitation Outlooks

Below are the latest official probabilistic outlooks from the Climate Prediction Center (CPC) for February temperatures and precipitation, and the average for the February through April three month period.

FEBRUARY 2010 OUTLOOKS

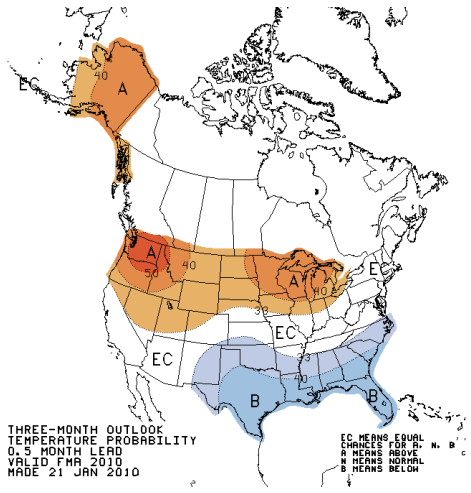


Temperature

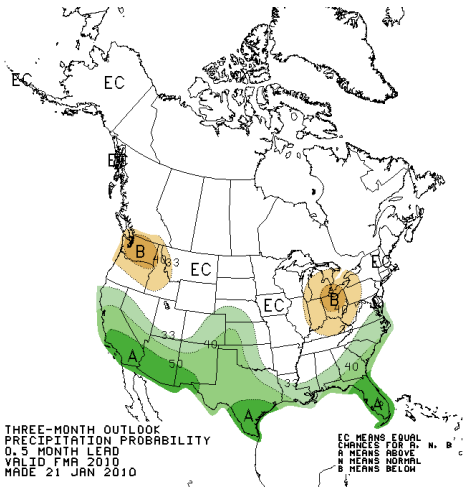


Precipitation

FEBRUARY through APRIL 2010 OUTLOOKS



Temperature



Precipitation

In the above CPC outlooks for February, there is an increased probability of above normal temperatures across South Dakota and the surrounding portions of Iowa, Minnesota, and Nebraska in the WFO FSD forecast area, and equal chances (EC) for above normal, normal and below normal precipitation (33.3 percent chance of any category happening). For the three-month period of February through April, there is again an increased chance of above normal temperatures, with continued equal chances for above normal, normal, and below normal precipitation.

The shaded areas on these maps indicate where there is a higher probability of above normal or below normal values. For example, on the February temperature outlook, there is a 50 percent chance of seeing above normal temperatures across the Pacific Northwest. There is still a 33 percent chance of normal temperatures, and a 17 percent chance of below normal temperatures in the region.

Experimental WFO FSD Outlooks

The following images show the "best-guess" outlooks developed at WFO FSD. They are based on a combination of the output from multiple neural network programs, comparing observed historical data from years with similar current values and recent trends of multiple climate indices (analogs), and looking at the statistical correlations of several observed climate indices with future observed temperatures and precipitation based on historical data from almost 60 years.

These images are created using the average forecast values from all of the outlook tools, and then plotting which tercile (i.e. 3 category: above, normal, below) the averages fall into for each of 12 climate divisions covering South Dakota, southwest Minnesota, northwest Iowa, and northeast Nebraska (see map below). Red is for above normal temperatures, blue is below normal temperatures, green is above normal precipitation, and brown is below normal precipitation

The table that follows below the images gives a breakdown of what percentage of the outlook tools fell into each of the 3 terciles for all of the climate divisions. These percentages are given to relay what level of confidence might be placed on the outlooks.

For the Analog tools, it was determined that the following years most closely matched the current values and recent trends of the greatest number (4 or more) of the climate indices that were studied:

1970, 1997, 2003, and 2007

Other years that matched closely with only 2 or 3 different indices included:

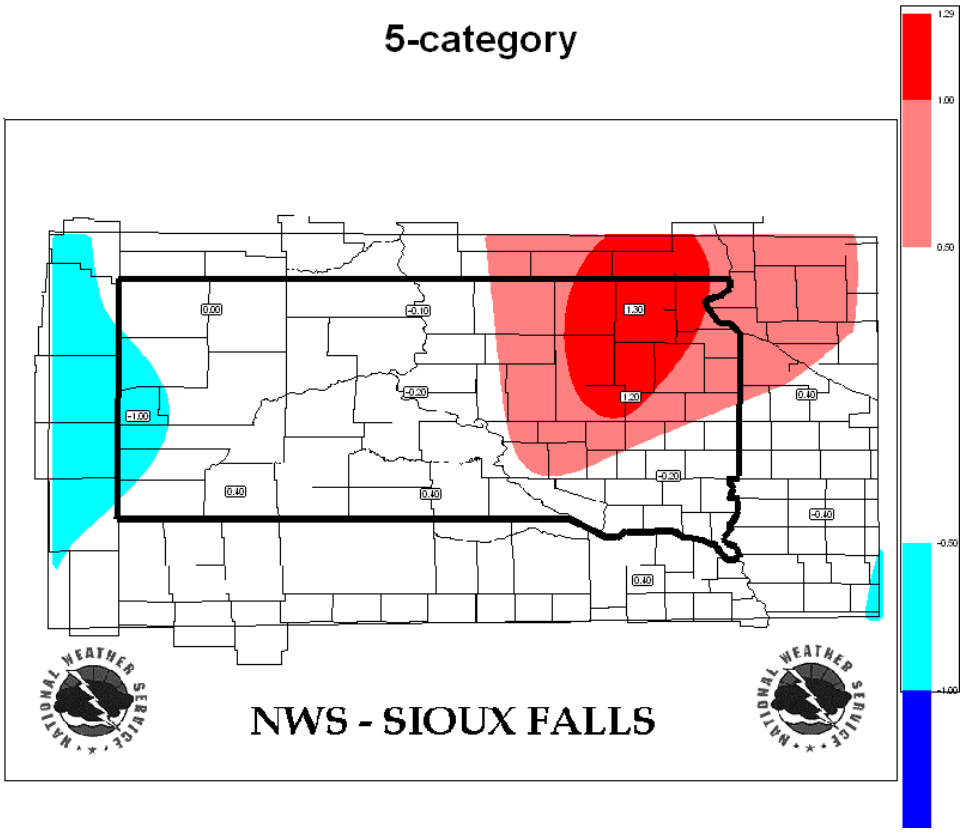
1958, 1964, 1966, 1969, 1977, 1978, 1979, 1992, 1995, and 1996

DISCLAIMER: WFO FSD is developing local 1 to 3 month outlooks of temperature and precipitation. These outlooks are experimental and still being tested and developed. They are being provided to give more details and a more deterministic outlook for South Dakota and the portions of Minnesota, Iowa, and Nebraska in the FSD forecast area. They are not intended to compete with or replace the official NOAA outlooks issued by the Climate Prediction Center (CPC), which are probabilistic. For more details on how these outlooks are prepared, or if you have any questions concerning these outlooks, please feel free to contact the WFO FSD Climate Services Focal Point Mike Gillispie.

February Temperature Outlook

based on 1/26/10 indices

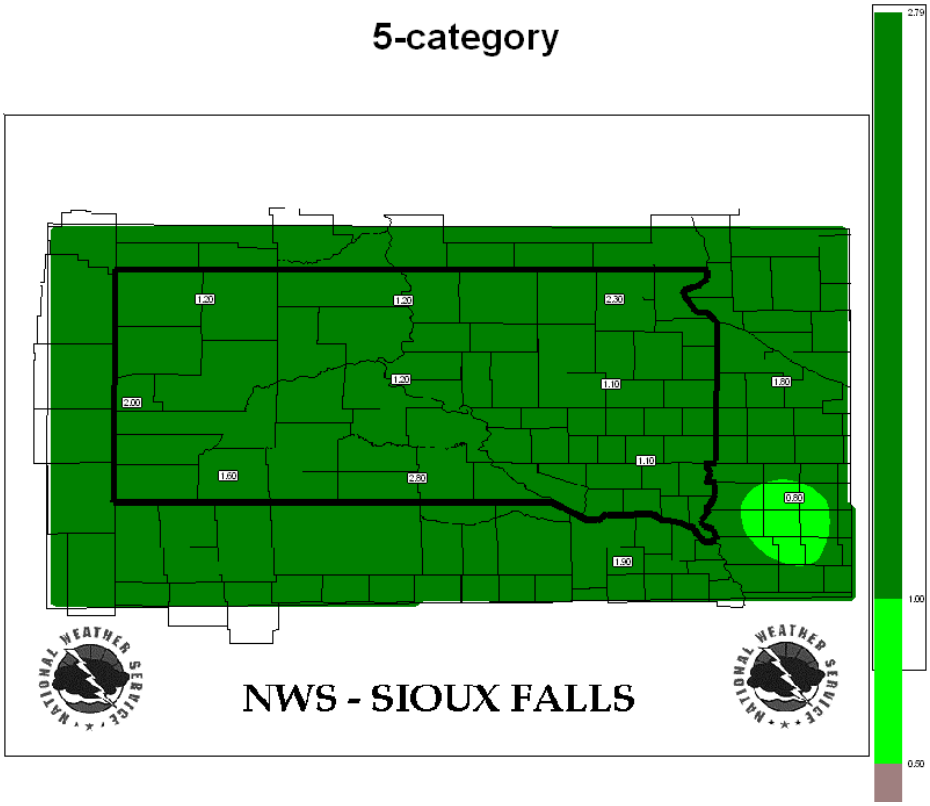
5-category



February Precipitation Outlook

based on 1/26/10 indices

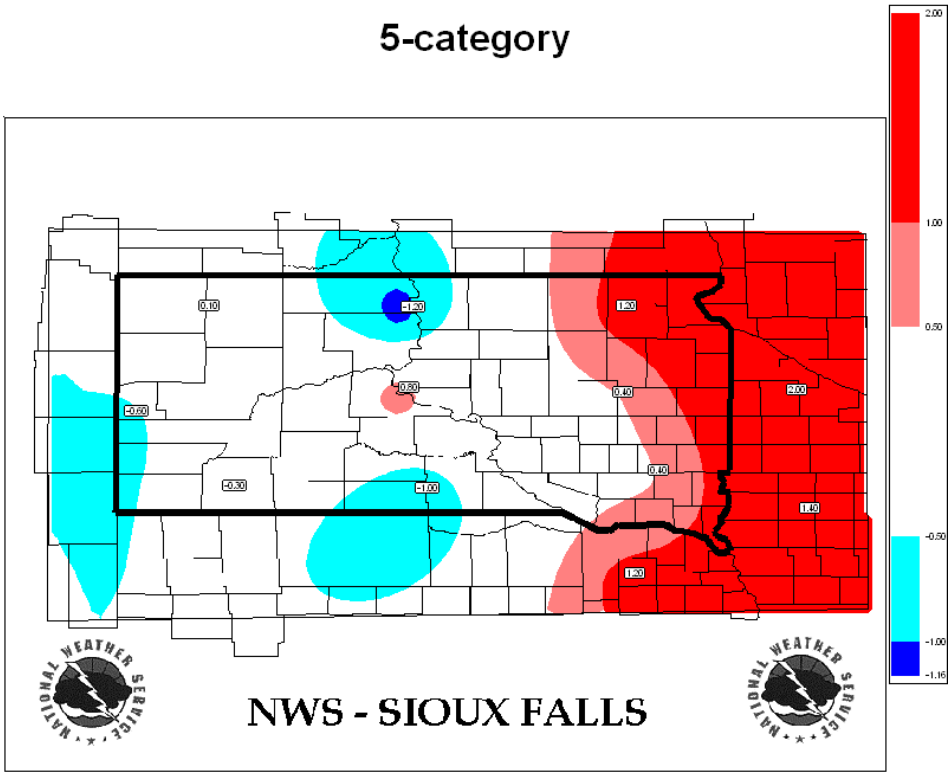
5-category



March Temperature Outlook

based on 1/26/10 indices

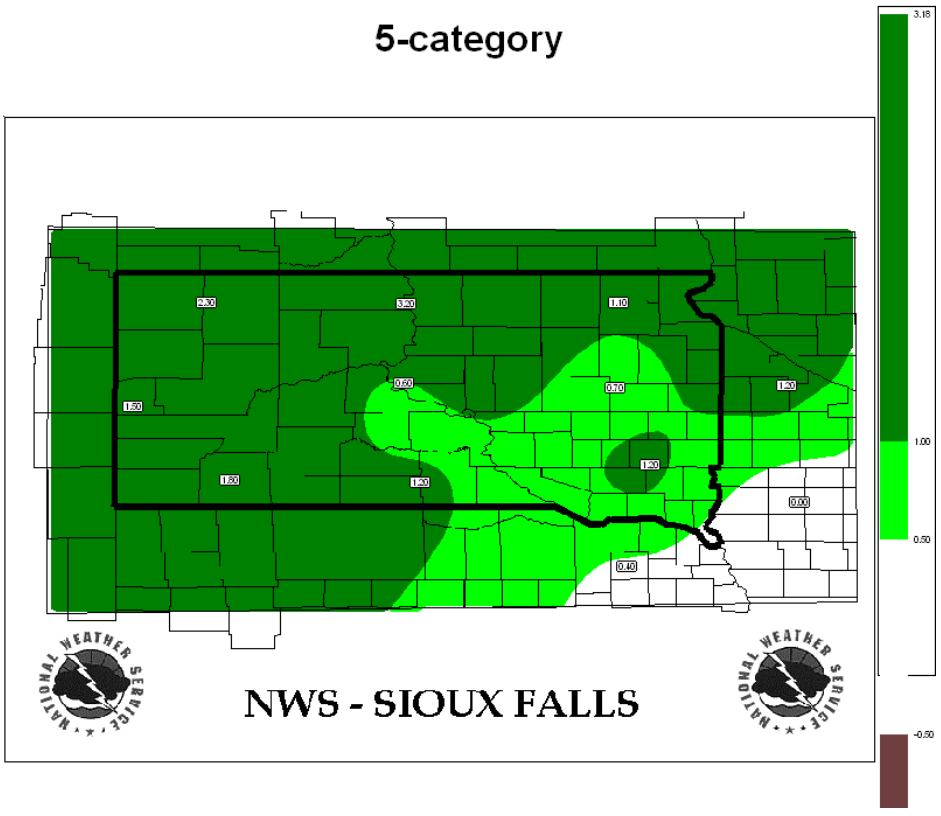
5-category



March Precipitation Outlook

based on 1/26/10 indices

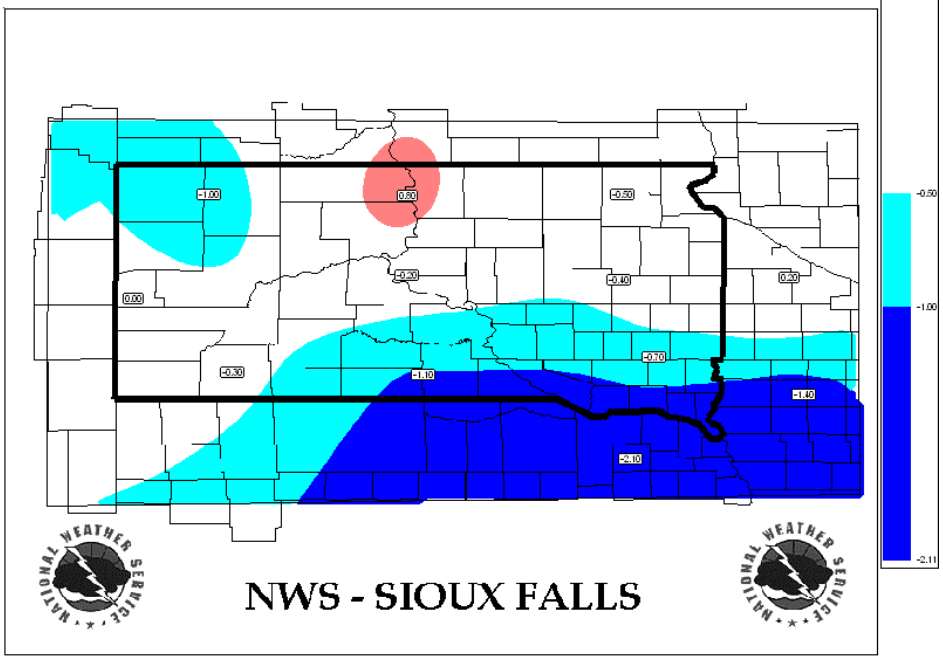
5-category



April Temperature Outlook

based on 1/26/10 indices

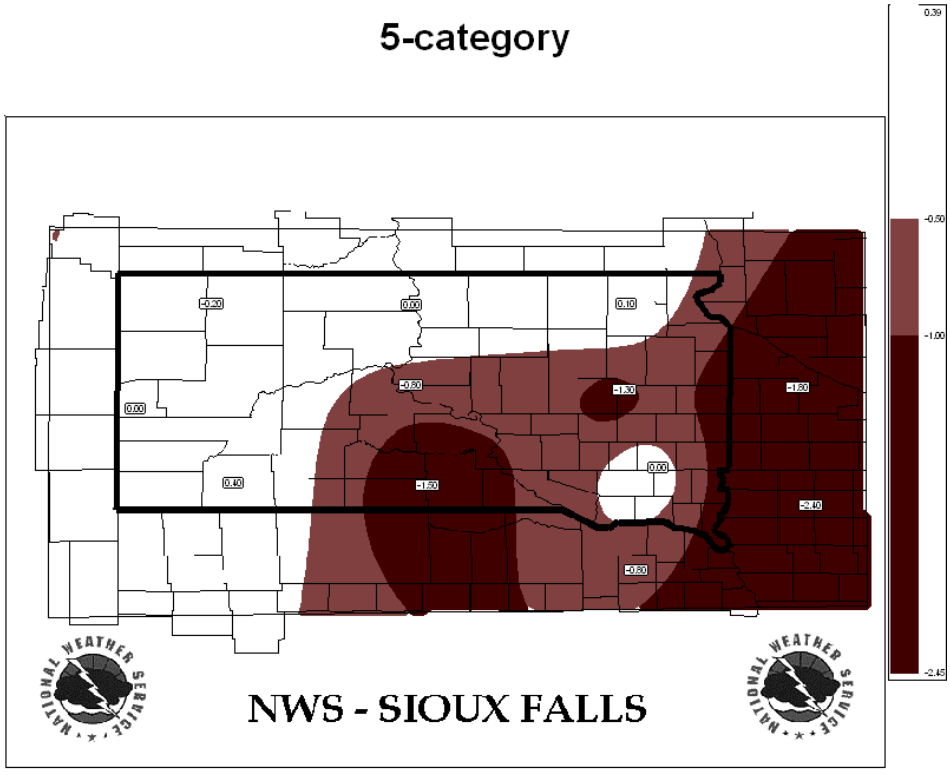
5-category



April Precipitation Outlook

based on 1/26/10 indices

5-category



Percent of outlook tools predicting each category

Feb. Temp	Above	Normal	Below
SDCD1	30	40	30
SDCD2	40	25	35
SDCD3	50	35	15
SDCD4	20	30	50
SDCD5	40	30	30
SDCD6	30	40	30
SDCD7	50	30	20
SDCD8	40	30	30
SDCD9	20	60	20
IACD1	20	40	40
MNCD7	30	50	20
NECD3	30	50	20

Feb. Prec	Above	Normal	Below
SDCD1	50	30	20
SDCD2	40	50	10
SDCD3	75	15	10
SDCD4	60	40	0
SDCD5	50	40	10
SDCD6	40	50	10
SDCD7	45	45	10
SDCD8	70	30	0
SDCD9	65	25	10
IACD1	30	60	10
MNCD7	50	50	0
NECD3	55	45	0

Mar. Temp	Above	Normal	Below
SDCD1	15	75	10
SDCD2	20	40	40
SDCD3	40	60	0
SDCD4	20	50	30
SDCD5	5	85	10
SDCD6	30	70	0
SDCD7	40	30	30
SDCD8	20	40	40
SDCD9	30	60	10
IACD1	40	60	0
MNCD7	50	50	0
NECD3	40	50	10

Mar. Prec	Above	Normal	Below
SDCD1	70	20	10
SDCD2	85	15	0
SDCD3	60	10	30
SDCD4	65	25	10
SDCD5	70	20	10
SDCD6	30	50	20
SDCD7	25	65	10
SDCD8	50	30	20
SDCD9	40	50	10
IACD1	30	40	30
MNCD7	50	30	20
NECD3	40	30	30

Apr. Temp	Above	Normal	Below
SDCD1	30	10	60
SDCD2	40	35	25
SDCD3	20	35	45
SDCD4	30	30	40
SDCD5	30	30	40
SDCD6	40	20	40
SDCD7	40	5	55
SDCD8	20	25	55
SDCD9	15	45	40
IACD1	20	30	50
MNCD7	40	20	40
NECD3	10	20	70

Apr. Prec	Above	Normal	Below
SDCD1	30	50	20
SDCD2	40	30	30
SDCD3	40	20	40
SDCD4	30	40	30
SDCD5	50	20	30
SDCD6	20	40	40
SDCD7	20	15	65
SDCD8	15	35	50
SDCD9	30	40	30
IACD1	0	40	60
MNCD7	10	40	50
NECD3	30	20	50